

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for caching web page content on a wireless communication device comprising:
receiving web page content over a wireless link;
identifying a data type of a portion of the web page content;
selecting one of a plurality of compression algorithms based on the data type;
compressing the [[a]] portion of the web page content using the selected compression algorithm in response to a request to cache; and
decompressing a compressed portion of the web page content in response to a request to retrieve cache.
2. (Currently Amended) The method as claimed in claim 1 wherein the web page content comprises a plurality of data types, at least some of the data types being identified by data type tags,
wherein identifying the data type comprises reading the data type tag associated with the portion of the web page content,
wherein the compressing comprises invoking one of a plurality of compression accelerators associated with the selected compressing algorithm to compress the portion the web page content ~~based on a data type of the portion,~~ and
wherein the decompressing comprises invoking one of a plurality of decompression accelerators associated with the selected compressing algorithm to decompress the compressed portion of the web page content ~~based on a data type of the compressed portion.~~
3. (Currently Amended) The method as claimed in claim 2 further comprises:
invoking a first of the compression accelerators for ~~the~~ portions of the web page content of a first data type being identified by first data type tags;

invoking a second of the compression accelerators for ~~the~~ portions of the web page content of a second data type being identified by second data type tags;

invoking a first of the decompression accelerators for ~~the~~ compressed portions of the web page content of the first data type; and

invoking a second of the decompression accelerators for ~~the~~ compressed portions of the web page content of the second data type.

4. (Currently Amended) The method as claimed in claim ~~[[1]]~~ 2, further comprising as part of a caching operation:

transferring the portion ~~portions~~ of the web page content to be cached to a compression engine input buffer of a compression accelerator associated with the selected compression algorithm; and

transferring, subsequent to compression, the compressed portion ~~portions~~ of the web page content from a compression engine output buffer to a ~~the~~ cache memory;

and as part of a cache retrieval operation:

retrieving the compressed portion ~~portions~~ of the web page content from the ~~the~~ [[a]] cache memory;

transferring the compressed portion ~~portions~~ of the web page content to a decompression engine input buffer of a decompression accelerator associated with the selected compression algorithm; and

retrieving decompressed portion ~~portions~~ of the web page content from a decompression engine output buffer after decompression.

5. (Currently Amended) A system for caching a web page content comprising:
a host processor to identify a data type associated with a portion of the web page content
and to select one of a plurality of compression algorithms based on the identified data type;

a compression engine to compress the portion ~~compressing portions~~ of the web page
content using the selected compression algorithm responsive to a request to cache the web page
content by the host processor, the compression engine comprising a plurality of compression
accelerators wherein at least one of the compression accelerators associated with the selected
compression algorithm is invoked to compress ~~one of the portions based on a data type of the~~
portion; and

a decompression engine to decompress ~~decompressing compressed~~ portions of the web
page content retrieved from a cache memory, the decompression engine comprising a plurality of
decompression accelerators wherein at least one of the decompression accelerators associated
with the selected compression algorithm is invoked to decompress one of the compressed portion
~~portions based on the~~ [[a]] data type of the compressed portion.

6. (Currently Amended) The system as claimed in claim 5 wherein the web page content
comprises a plurality of data types, at least some of the data types being identified by data type
tags,

wherein identifying the data type comprises reading the data type tag associated with the
portion of the web page content

wherein~~[[:]]~~ the compression engine invokes a first of the compression accelerators for
portions of the web page content of a first data type identified by a first data type tag and invokes
a second of the compression accelerators for portions of the web page content of a second data
type identified by a second data type tag, and

wherein the decompression engine invokes a first of the decompression accelerators for
the compressed portions of the web page content of the first data type and invokes a second of
the compression accelerators for the compressed portions of the web page of the second data
type.

7. (Currently Amended) The system as claimed in claim 5 ~~[[6]]~~ wherein ~~[[:]]~~ the compression engine comprises:

a compression engine controller to invoke one of the compression accelerators based on the identified data type;

a compression engine input buffer to store the portion of the web page content prior to compression by the invoked compression accelerator ~~accelerators~~; and

a compression engine output buffer to store compressed content received from the invoked compression accelerator ~~accelerators~~, and

wherein the decompression engine comprises:

a decompression engine controller to invoke one of the decompression accelerators based on the identified data type;

a decompression engine input buffer to store the compressed portions of the web page content prior to decompression by the invoked decompression accelerator ~~accelerators~~; and

a decompression engine output buffer to store decompressed portions of the portion of the web page content subsequent to decompression.

8. (Currently Amended) The system as claimed in claim 7 further comprising ~~[[:]]~~

~~a host processor; and~~ a cache memory,

wherein as part of a caching operation, the host processor transfers the portion ~~portions~~ of the web page content to be cached to the compression engine input buffer, and subsequent to compression, transfers the compressed portion ~~portions~~ of the web page content from the compression engine output buffer to the cache memory, and

wherein as part of cache retrieval operation, the host processor retrieves the compressed portion ~~portions~~ of the web page content from cache memory, transfers the compressed portion ~~portions~~ of the web page content to the decompression engine input buffer, and retrieves decompressed portion ~~portions~~ of the web page content from the decompression engine output buffer.

9. (Currently Amended) A compression engine comprising:
a plurality of compression accelerators; and
a controller to identify identifying a data type for different portions of web page content ~~of a web page~~ to be cached, and to invoke a selected ~~invoking~~ one of the compression accelerators of the plurality to compress a portion of the web page content based on the identified data type,
wherein a compression algorithm is selected based on the identified data type, the compression algorithm being implemented by the selected compression accelerators.

10. (Currently Amended) The compression engine as claimed in claim 9 wherein the web page content ~~of the web page~~ comprises a plurality of data types, and wherein the controller selects one of the compression accelerators for each data type for performing a compression algorithm based on the data type.

11. (Currently Amended) The compression engine as claimed in claim ~~[[9]]~~ 10 wherein each compression accelerator of the plurality is configured to implement one of a plurality of predetermined compression algorithms, wherein one of the compression algorithms is selected for each portion based on the data type for the portion.

12. (Currently Amended) The compression engine as claimed in claim 9 further comprising:
an input buffer to store the portion of the web page content prior to compression by the selected compression accelerator ~~accelerators~~; and
an output buffer to store a storing compressed portion of the web page content received from the compression accelerator ~~accelerators~~.

13. (Currently Amended) The compression engine as claimed in claim 9 wherein the web page content ~~of the web page~~ comprises a plurality of data types, each data type having a data type tag associated therewith to identify the data type, and wherein the controller reads the data

type tag and selects a compression algorithm and an associated one of the compression accelerators for each data type, and wherein:

a first of the compression accelerators is configured to implement in hardware a first compression algorithm for a first of the data types; and

a second of the compression accelerators is configured to implement in hardware a second compression algorithm for a second of the data types,

wherein the first and second data types are distinct, and the first and second compression algorithms are distinct.

14. (Original) The compression engine as claimed in claim 13 wherein the first compression algorithm is a Lempel-Ziv 77 (LZ77) compression algorithm, and the first data type comprises portable network graphics (PNG) data.

15. (Original) The compression engine as claimed in claim 13 further comprising a third compression engine configured to hardware implement a third compression algorithm for third data types of the group consisting of either joint photographic experts group (JPEG) or moving pictures experts group (MPEG) data.

16. (Original) The compression engine as claimed in claim 14 wherein the second compression algorithm is a LZW compression algorithm, and the second data type comprises graphic interface format (GIF) data.

17. (Original) The compression engine as claimed in claim 9 wherein the controller refrains from invoking one of the compression accelerators for portions of the content received in compressed form.

18. (Currently Amended) A decompression engine comprising:
a plurality of decompression accelerators; and
a controller to identify a data type for different compressed portions of content of ~~[[a]]~~
web page content to be retrieved, and to invoke a selected one of the decompression accelerators
of the plurality based on the data type,
wherein a decompression algorithm is selected based on the identified data type, the
decompression algorithm being implemented by the selected decompression accelerator.

19. (Currently Amended) The decompression engine as claimed in claim 18 wherein the
compressed portions of the web page content ~~of the web page~~ comprises a plurality of data types,
each data type having a data type tag associated therewith, and wherein the controller reads the
data type tag and selects one of the decompression accelerators for each data type.

20. (Currently Amended) The decompression engine as claimed in claim 18 wherein each
decompression accelerator of the plurality is configured to implement one of a plurality of
predetermined decompression algorithms, wherein one of the decompression algorithms is
selected for each portion based on the data type for the portion.

21. (Original) The decompression engine as claimed in claim 18 further comprising:
an input buffer to store the compressed portions of the content prior to decompression by
the decompression accelerators; and
an output buffer to store decompressed portions of the content subsequent to
decompression.

22. (Currently Amended) The decompression engine as claimed in claim 18 wherein the
compressed portions of the web page content ~~of the web page~~ ~~comprises~~ comprise a plurality of
data types, each data type having a data type tag associated therewith, and wherein the controller
reads the data type tag and selects one of the decompression accelerators for each data type, and
wherein:

a first of the decompression accelerators is configured to hardware implement a first decompression algorithm for a first of the data types; and

a second of the decompression accelerators is configured to hardware implement a second decompression algorithm for a second of the data types,

wherein the first and second data types are distinct, and the first and second decompression algorithms are distinct.

23. (Original) The decompression engine as claimed in claim 22 wherein the first decompression algorithm is a Lempel-Ziv 77 (LZ77) decompression algorithm, and the first data type comprises portable network graphics (PNG) data.

24. (Original) The decompression engine as claimed in claim 23 wherein the second decompression algorithm is a LZW decompression algorithm, and the second data type comprises graphic interface format (GIF) data.

25. (Original) The decompression engine as claimed in claim 22 further comprising a third decompression engine configured to hardware implement a third decompression algorithm for third data types of the group consisting of either joint photographic experts group (JPEG) or moving pictures experts group (MPEG) data.